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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/578,226	OKAYAMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David N. Spector	2873	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 5/04/2006.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>0506/20060504</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                        | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

Claims 1-9 are allowed. All pending claims thus being allowable, prosecution on the merits is closed in this application.

### ***Reasons for Allowance***

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken either singly or in combination fails to anticipate or fairly suggest the features/limitations of applicant's sole independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. More specifically, in regard to independent claim 1, the prior art taken either singly or in combination fails to anticipate or fairly suggest an imaging device comprising, *inter alia*, a solid-state imaging sensor including an array of pixels having a photo-electric conversion function and an array of micro lenses; in which the conditional relationship  $\arctan(L/f) \leq \theta$  (Claim 1, Line 17) is satisfied for a pixel from among the pixels included in the imaging area of unit corresponding to each of the micro lenses positioned farthest from an optical axis of a corresponding micro lens; taken together in combination with the totality of particular features/limitations recited therein.

### ***Other Remarks/Information***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be labeled "Comments on Statement of Reasons for Allowance."

The International Search Report (PCT/ISA/210) and Written Opinion of the International Searching Authority (PCT/ISA/237) prepared for International Application PCT/JP2004/016332 (e.g. the parent of the instant National Stage application) has been reviewed by the examiner. All of the references cited in the International Search Report and the Written Opinion of the International Searching Authority have been considered in the examination of the instant application.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shiomi (U.S. Patent No. 6,963,674) based upon a Division of U.S. Patent Application

Art Unit: 2873

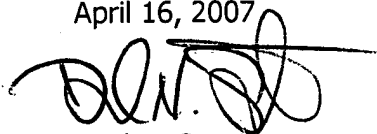
***Notice of Allowability***

Serial No. 09/603,629, filed on 06/26/2000, now U.S. Patent No. 6,707,955 (e.g. cited by applicant in the instant application. Topper et al. (U.S. Patent No. 5,157,497); Vogel (U.S. Patent No. 4,979,042 and Pieters et al. (U.S. Patent No. 3743,772) disclose shading corrections for solid-state imaging sensors.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any other inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Spector whose telephone number is (571) 272-2338. The examiner can normally be reached at this number Monday through Friday between 6:00 AM and 2:30 PM. The Official FAX number for the United States Patent and Trademark Office is (571) 273-8300.

April 16, 2007

A handwritten signature in black ink, appearing to read 'D.N. Spector', with a long horizontal stroke extending to the right.

David N. Spector  
Primary Examiner  
Art Unit 2873